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Chang-Ming Yang

YANG52

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EXAMINER

NAQI, SHARICK

ART UNIT

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3736

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/518,054	Applicant(s) YANG, CHANG-MING	
	Examiner Sharick Naqi	Art Unit 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 0200.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/16/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The Examiner acknowledges the amendment filed on June 19, 2008.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 16 recites "the second testing device" and "the second testing device being a different type of testing device than the first medical testing device." However, no "testing devices" were previously mentioned in claim 16 or the claims upon which claim depends so there is insufficient antecedent basis for these testing devices in the claim. It is unclear to the Examiner if the Applicant is trying to add additional elements to the apparatus or is referring to the treating devices previously mentioned in claim 12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shusterman US Patent Publication Number 2003/0023146 in view of Davidson US Patent Publication Number 2004/0003455.

Shusterman discloses a method of monitoring the physiological functioning and conditions of a person comprising

the step of using sensors in a garment body worn by the person or biochips implanted in the person to continuously monitor the physiological functioning and conditions of the person (Shusterman, [0006, 0044]), and

the step of using a monitoring center unit (patient monitoring unit 214) to transmit monitored data to a proximity or remote control center (central station 100) through a communication port so that the user can interact with the monitoring center unit (Shusterman [0006, 0041, 0044]) or the user can have a two-way interaction with the remote control center, thereby providing related information to medical care persons at the remote side for diagnosis or giving an instruction to a person at the proximity side to take emergency measures.

Shusterman also teaches that the system includes sensors to determine when a patient has fallen (Shusterman [0083]).

Shusterman does not disclose the step of using medical treating devices mounted in predetermined zones of the garment body for applying medical treatments to the user wearing the garment body. However Davidson, a reference in an analogous art, discloses a wearable inflatable system that detects a fall using sensors and inflates multiple user-worn inflatable elements (inflatable elements are airbags thus they are equivalent to medical treatment devices mounted in predetermined zones of a garment body) to protect a falling body (Davidson [0009, 0017]). Davidson further teaches that the system adjusts the trajectory of the falling body, thereby avoiding dangerous falling positions (Davidson [0015]). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Shusterman that detects patient falls with Davison's disclosed step of providing a wearable fall protection system that inflates multiple user worn elements upon detecting a fall because Davidson teaches that the fall protection system adjusts the trajectory of the falling body, thereby avoiding dangerous falling positions and protecting the user (Davidson [0015, 0017]).

2. The method as claimed in claim 1, further comprising
the step of storing, managing and analyzing the monitored data for diagnosis for finding out abnormal conditions (Shusterman [0006, 0054]),

the step of using a display to enable the user to inquire the way to treat himself or to inform the medical care person taking care of the user when a syndrome showing

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degeneration of the physiological functioning of the user occurred (Shusterman [0053-0054, 0072, 0075]), and

the step of using a video camera to pick up the images of the user and to transmit monitored images to the remote control center through the communication port, for enabling the person in charge at the remote control center to determine the necessary measures (Shusterman [0063]).

Claims 3-5 and 7-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shusterman in view of Davidson US Patent Publication Number 2004/0003455.

In regards to claim 3, Shusterman discloses apparatus for monitoring the physiological functioning and conditions of a user, comprising:

a garment body wearable to a user, the garment body having a plurality of zones (Shusterman Figure 6);

sensors mounted in the zones of the garment body respectively for detecting the physiological functioning and conditions of the user wearing the garment body (Shusterman Figure 6, [0007]);

a communication port for transmitting the monitored data to a remote control center on the real time or at a delayed time or receiving and answering the inquiries of the user (Shusterman [0041, 0044]);

a monitoring center unit electrically connected with the sensors and the communication port for receiving and transmitting signals such that the communication

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port is used to transmitting the monitored data to the remote control center, the monitoring center having I/O ports connectable to the sensors (Shusterman [0006, 0041, 0044, 0089]);

whereby the monitoring data of the user's physiological functioning and conditions is stored, managed and analyzed to find out abnormal conditions of the user for further treatments (Shusterman [0006, 0054]).

Shusterman also teaches that the system includes sensors to determine when a patient has fallen (Shusterman [0083]).

Shusterman does not disclose medical treating devices connected to the monitoring center unit or communication port and mounted in predetermined zones of the garment body for applying medical treatments to the user wearing the garment body, wherein the medical treating devices are selected from the group consisting of oxygen source devices, pumps, air bags, body temperature regulators, pain-causing devices, hypodermic syringes and electroshock devices. However Davidson, a reference in an analogous art, discloses a wearable inflatable system that detects a fall using sensors and inflates multiple user-worn inflatable elements (the inflatable elements are airbags thus they are equivalent to medical treatment devices mounted in predetermined zones of a garment body) to protect a falling body (Davidson [0009, 0017]). Davidson further teaches that the system adjusts the trajectory of the falling body, thereby avoiding dangerous falling positions (Davidson [0015]). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the monitoring system of Shusterman that detects patient falls with Davison's wearable fall

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protection system that inflates multiple user worn elements upon detecting a fall because Davidson teaches that the system adjusts the trajectory of the falling body, thereby avoiding dangerous falling positions and protecting the user (Davidson [0015, 0017]).

4. The apparatus as claimed in claim 3, wherein the sensors are selected from the group consisting of pressure sensors, temperature sensors, terminal sensors, voice sensors, biochemical sensors and biochips (Shusterman Fig 5).

5. The apparatus as claimed in claim 3 or claim 4, wherein the sensors produce signals corresponding to the physiological functioning and conditions of the user and send the signals to the communication port (Shusterman Fig 5, [0044]).

7. The apparatus as claimed in claim 6, wherein the air bag is used with the pump, the oxygen source device or the sensors to correct the posture of the user, to fix a broken bone in position, to impart a pressure to the user, to stop bleeding of blood, to apply cardiopulmonary resuscitation or abdominal thrust (Heimlich maneuver) to the user (Davison [0015-0017]).

8. The apparatus as claimed in claim 7, wherein the air bag is supported on a bracket at the garment body for supporting the spine of the user wearing the garment body in shape (Davison [0015-0017]).

9. The apparatus as claimed in claim 3, wherein the communication port is connectable with a communication device to transmit monitored data to the remote control center for remote diagnosis, a computer or other compatible devices (Shusterman [0044]).

10. The apparatus as claimed in claim 3, wherein said monitoring center unit further comprises:

a sensor interface electrically connected to the sensors to transmit detected data to a processor for computing (Shusterman [0006-0007]);

a communication port for transmitting detected data to the remote control center through a communication device for remote diagnosis, or to a computer or other compatible devices (Shusterman [0044]);

a data storage device for storing input data and detected data (Shusterman [0055]);

a display disposed at the garment body for displaying information (Shusterman [0088, 0095]); and

a power system for providing the apparatus with the necessary working electricity (Shusterman [0058]).

11. The apparatus as claimed in claim 3 or claim 10, further comprising means for data searching for enabling the monitoring center unit to be set for individual use subject to personal data inputted therein (Shusterman [0173, 0199]).

In regards to claim 12, Shusterman discloses an apparatus for monitoring the physiological functioning and conditions of a user, comprising:

a garment body wearable to a user (Shusterman Figure 6);

first and second sensors mounted in the garment body for detecting the physiological functioning data and conditions of the user wearing the garment body (Shusterman, Figure 6 [0083-0088]);

a communication port for transmitting the physiological functioning data and conditions to a remote control center on the real time or at a delayed time or receiving and answering the inquiries of the user (Shusterman [0041, 0044]);

a monitoring center unit electrically connected with the sensors and the communication port for receiving and transmitting signals such that the communication port is used to transmitting the monitored data to the remote control center, the monitoring center having I/O ports connectable to the sensors and medical devices (Shusterman [0006, 0041, 0044, 0089]);

whereby the monitoring data of the user's physiological functioning and conditions is stored, managed and analyzed to find out abnormal conditions of the user for further treatments (Shusterman [0006, 0054]).

Shusterman also teaches that the system includes sensors to determine when a patient has fallen (Shusterman [0083]).

Shusterman does not disclose first and second medical treating devices mounted in the garment body for applying medical treatments to the user wearing the garment body, wherein the first and second medical treating devices are spaced apart from each other and connected to the first and second sensors, respectively, the medical treating devices electrically connected to the monitoring center unit or communication port. However Davidson, a reference in an analogous art, discloses a wearable inflatable system that detects a fall using multiple sensors and inflates multiple user-worn inflatable elements (inflatable elements are airbags thus the different airbags are equivalent to the first and second medical treatment devices mounted in predetermined zones of a garment body, spaced apart and connected to multiple sensors) to protect a falling body (Davidson Figure 2, [0009-10, 0017]). Davidson further teaches that the system adjusts the trajectory of the falling body, thereby avoiding dangerous falling positions (Davidson [0015]). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the monitoring system of Shusterman that detects patient falls with Davison's wearable fall protection system that inflates multiple user worn elements upon detecting a fall because Davidson teaches that the system adjusts the trajectory of the falling body, thereby avoiding dangerous falling positions and protecting the user (Davidson [0015, 0017]).

13. The apparatus as claimed in claim 12, wherein the garment body, first and second sensors and first and second medical treating devices are wearable by the user and removeable from the user as a single unit (Shusterman figure 6 and Davidson figure 2. It is the Examiner's position that the apparatus resulting from the combination of the two references would be capable of being worn and removed as a single unit).

14. The apparatus of claim 12, wherein the first and second medical treating devices apply different medical treatments to the user wearing the garment body (Davidson figure 2. The different airbags are applied to different body areas therefore they provide different medical treatments to the user).

15. The apparatus of claim 14, wherein the first medical treating device is one of an oxygen source device, pump, air bag, body temperature regulator, pain causing device, hypodermic syringe and electroshock device (Davidson figure 2. Inflatable element is an airbag).

16. The apparatus of claim 16, wherein the second medical testing device is one of an oxygen source device, pump, air bag, body temperature regulator, pain causing device, hypodermic syringe and electroshock device, the second medical testing device being a different type of testing device than the first medical testing device (Davidson figure 2, [0009-0010]).

17. The apparatus of claim 12, wherein the first and second sensors detect different types of physiological functioning data and conditions of the user wearing the garment body (Shusterman, Figure 6 [0083-0088], Davison [0009-0010]).

18. The apparatus as claimed in claim 11, wherein the first and second sensors are selected from the group consisting of pressure sensors, temperature sensors, terminal sensors, voice sensors, biochemical sensors and biochips (Shusterman, Figure 6 [0083-0088], Davison [0009-0010]).

Response to Arguments

Applicant's arguments filed June 19, 2008 have been fully considered but they are not persuasive.

Applicants arguments in regards to the newly added features of claim 1 are moot based on the new rejection provided above. Additionally, in regards to applicant's arguments that Shusterman does not disclose the use of biochips, it should be noted that claimed limitation is "using sensors in a garment body worn by the person or biochips implanted in the person" (Claim 1 lines 2-3). It is the Examiner's position that the use of the word "or" in the claim language means that the prior art needs to meet only one of the limitations separated by "or" in order to properly reject the claim. Thus the sensors disclosed by Shusterman are sufficient to meet the limitation.

In regards to claim 3, Applicant argues that neither Shuster nor Davidson includes a garment that has "a plurality of zones." The Examiner disagrees. Although

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the applicant has not provided an explicit definition of a "zone", a known definition of "zone" is an area or a region distinguished from adjacent parts by a distinctive feature or characteristic (www.Thefreedictionary.com). Thus, the broadest reasonable interpretation in light of the specification of a zone is an area/region that is distinguished from surrounding areas by a feature. Figure 6 of Shusterman and Figure 2 of Davidson show that each sensor and the inflatable element is located on a different area respectively of the garments, the different sensors and inflatable elements distinguish their location from other areas, thus forming "zones" and properly rejecting the limitation of each garment having "a plurality of zones."

Applicant further argues that Davidson does not disclose a medical treating device because "there is no likelihood of success that the inflatable elements of Davidson could serve to function as the airbags of the Applicant's does, which includes fixing a bone in place, to impart pressure to the user, to stop bleeding and to apply cardiopulmonary resuscitation or abdominal thrusts" (Remarks page 10, lines 6-9). Examiner disagrees. In the claims, the Applicant defines a medical treating device as "selected from the group consisting of oxygen source devices, pumps, air bags, body temperature regulators . . ." (Claim 1, lines 7-10) and "the air bag is used with . . . or the sensors . . . to impart a pressure to the user . . . or abdominal thrust" (claim 7). The inflatable elements of Davidson meet the limitation of a medical treating device as defined by the Applicant because the Applicant admits that the inflatable elements of Davidson may be considered airbags (Remarks page 10, lines 5-6), and as explained in paragraph 0009-0010 and shown in Figure 2, the system of Davison uses the inflatable

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elements/airbags with sensors so that when deployed, the airbags would impart a pressure to the user.

In regards to Applicants arguments that Davidson does not disclose all the other examples of medical treating devices, Examiner notes that the claimed limitation states “the medical treatment devices are selected from the group consisting of oxygen source devices . . . airbags . . .” thus requiring not all the listed devices, just more than one from the group (including more than one of the same type), so the airbags of Davidson are sufficient to reject the limitation.

Applicant's argues that there is no motivation to combine the two references. Examiner disagrees. Both references disclose wearable systems with sensors that detect falls and Davidson discloses the additional feature of inflating multiple user-worn inflatable elements to protect a falling body (Davidson Figure 2, [0009-10, 0017]). Davidson provides motivation to combine the two references with the teaching that the system adjusts the trajectory of the falling body, thereby avoiding dangerous falling positions (Davidson [0015]). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the monitoring system of Shusterman that detects patient falls with Davison's wearable fall protection system that inflates multiple user worn elements upon detecting a fall because Davidson's system adjusts the trajectory of the falling body, thereby avoiding dangerous falling positions and protecting the user (Davidson [0015, 0017]).

With respect to claim 8, applicant argues that Davidson does not disclose a bracket at the garment body for supporting the air bag and Davidson does not disclose

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the airbag supporting the spine of the user wearing the garment body in shape because “the shape of the airbag as claimed in claim 8 and shown in FIG. 3 is an “S” shape” (Remarks page 11, lines 15-16). Examiner disagrees. Claim 8 states, “the air bag is supported on a bracket at the garment body for supporting the spine of the user wearing the garment body in shape.” Although an explicit definition of “bracket” is not provided in the specification, as best understood by the Examiner, the broadest reasonable interpretation in light of the specification of a “bracket” is an element that supports the airbag. Davidson discloses an element 24 supporting the airbag element 22 that in turn supports the patient’s back as shown in Figure 2, It is the Examiner’s position that this meets the broadest reasonable definition in light of the specification of a “bracket”. The “S” shape of the airbag is not claimed and the Applicant is reminded that limitations from the specification are not read into the claims. Additionally, the word “for” in the claim(s) may be interpreted as intended use. Intended use/functional language does not require that reference specifically teach the intended use of the element. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. It is the Examiner’s position that, Davidson’s airbag is capable of performing the intended use of supporting spine of the user in shape because the particular shape being supported is not claimed.

In regards to applicants arguments for new claims 12-18, see the rejection of those claims above.

Applicant is invited to request an interview to discuss suggestions to overcome the applied prior art.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharick Naqi whose telephone number is (571)272-3041. The examiner can normally be reached on 8:30 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 571-272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. N./

Examiner, Art Unit 3736

/Michael C. Astorino/

Primary Examiner, Art Unit 3736

September 15, 2008